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Slime trails in the moonlight

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Abstract
Slug damage to field corn was reported east of the Mississippi River in southeastern Wisconsin on June 18. In addition, three reports of possible slug-damaged soybean fields in northeast and east central Iowa were reported by Brian Lang and Virgil Schmitt, ISUE field crop specialists, over the June 20 weekend. Although slugs are only occasional field crop pests in Iowa, weather conditions this year have been favorable for slugs, and producers in eastern Iowa with high-residue, no-till fields are advised to be on the lookout. Slugs are gastropods closely related to snails and primarily feed at night or in cool, early morning hours.

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[1]

Slugs use their tooth-covered tongue (radula) as a rasp to scrape tissue from leaf surfaces.


[2]

Slug injury to corn.

Crop injury from slugs is by defoliation of established stands that delays crop development. Slugs use their tooth-covered tongue (radula) as a rasp to scrape tissue from leaf surfaces. Freshly damaged plant surfaces will often show a telltale dried slime trail that was deposited as the slug moved across the leaf. Damage to plants appears as streaks or holes on leaves. If you find suspected slug damage, look for the slugs in and under crop residue during the day, especially at the base of last year's corn stalks.

Conditions that favor slug development include the following:

- no-till practices that provide crop residue on the soil surface for slug habitat,
- dense weed cover, or addition of organic matter such as livestock manure,
- mild winter temperatures that enhance overwintering success,
- a prolonged period of relatively cool temperatures (63-68° F) combined with evenly distributed rainfall that maintains wet soil moisture conditions, and
- either heavy-textured soils or coarse-textured soils, neutral to high pH, and excessive nitrogen levels.

Cool growing conditions that delay crop development will extend the period of susceptibility of the crop to slug injury. Both corn and soybean can tolerate up to 40 percent defoliation in vegetative stages without significant yield loss. Although a clearly defined economic

threshold for slug damage has not been established, treatment may be advised when defoliation reaches 40 percent or more, wet conditions are prevalent, and slug feeding is occurring. Cultivation can reduce slug populations but not always enough to stop the problem. The use of row cleaners at planting in problem no-till fields tends to reduce the risk of slug populations developing.

One bait material is registered for slug control on corn and soybean. Deadline Granules (or Deadline Bullets) manufactured by Valent contain 4 percent metaldehyde, and are labeled at 10 to 40 pounds per treated acre. The treatment cost is in excess of $30 per acre for any of these materials, but often spot treatment is appropriate, so total area treated and total cost are reduced. Any bait must be applied during peak slug activity periods for optimum results. Grower-prepared baits that use cracked corn may have been used in the past; however, all grower-prepared materials for slug control are not labeled and therefore illegal to use.

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